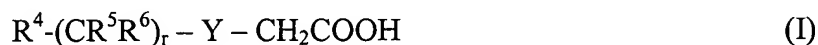


ABSTRACT

The present invention relates to IR-sensitive compositions suitable for the manufacture of printing plates developable on-press. The IR-sensitive compositions comprise:

- (a) a first polymeric binder which does not comprise acidic groups having a pKa value less than or equal to 8;
- (b) a second polymeric binder comprising polyether groups
- (c) an initiator system comprising
 - (i) at least one compound capable of absorbing IR radiation selected from triarylamine dyes, thiazolium dyes, indolium dyes, oxazolium dyes, cyanine dyes, polyaniline dyes, polypyrrole dyes, polythiophene dyes and phthalocyanine pigments;
 - (ii) at least one compound capable of producing radicals selected from polyhaloalkyl-substituted compounds; and
 - (iii) at least one polycarboxylic acid represented by the following formula I



wherein Y is selected from the group consisting of O, S and NR⁷,
each of R⁴, R⁵ and R⁶ is independently selected from the group consisting of hydrogen, C₁-C₄ alkyl, substituted or unsubstituted aryl, -COOH and NR⁸CH₂COOH,
R⁷ is selected from the group consisting of hydrogen, C₁-C₆ alkyl,

$-\text{CH}_2\text{CH}_2\text{OH}$, and $\text{C}_1\text{-C}_5$ alkyl substituted with $-\text{COOH}$,

R^8 is selected from the group consisting of $-\text{CH}_2\text{COOH}$, $-\text{CH}_2\text{OH}$ and

$-(\text{CH}_2)_2\text{N}(\text{CH}_2\text{COOH})_2$ and r is 0, 1, 2 or 3, with the proviso that at least one of R^4 , R^5 , R^6 , R^7 and R^8 comprises a $-\text{COOH}$ group or salts thereof;

and

(d) a free radical polymerizable system comprising at least one member selected from unsaturated free radical polymerizable monomers, oligomers which are free radical polymerizable and polymers containing $\text{C}=\text{C}$ bonds in the back bone and/or in the side chain groups,

wherein the following inequality is met:

$$\text{ox}_i < \text{red}_{ii} + 1.6 \text{ eV}$$

with ox_i = oxidation potential of component (i) in eV

red_{ii} = reduction potential of component (ii) in eV.